

## CLAIMS

1. A method of setting up multimedia calls from a (telephone) first terminal (T1) to a second terminal (T2) connected to an IP network, the method being
- 5 characterized in that in order to set up a call to the second terminal (T2) from the first terminal (T1):
- the first terminal (T1) sends to a connection server (SMR) a call request (DA) containing a predetermined (called party) second identifier (ID2) for
  - 10 the second terminal (T2);
  - on receiving the call request (DA), the connection server (SMR) temporarily stores the (called party) second identifier (ID2) in a correspondence table (TC) in association with a first number (NT) determined from the
  - 15 call request (DA) and instigates the sending by the first terminal (T1) of an incoming call (AE) to a particular second number (NS) which is a service number connecting to a call set-up gateway (PEA), the incoming call (AE) including a call characteristic (CAR) to indicate a
  - 20 relationship between the first number (NT) and the (service) second number (NS); and
  - the call set-up gateway (PEA) signals at least the characteristic (CAR) of the received incoming call (AE) to the connection server (SMR), which determines the
  - 25 (called party) second identifier (ID2) associated in the correspondence table (TC) with the first number (NT) corresponding to the signaling (SAE) of the characteristic (CAR) of the incoming call (AE) in order to signal the incoming call to the second terminal (T2)
  - 30 corresponding to the (called party) second identifier (ID2) determined in this way, in order to set up a multimedia communications channel between the second terminal (T2) and the call set-up gateway (PEA), which then connects the multimedia communications channel to
  - 35 the incoming call.

2. A call set-up method according to claim 1, characterized in that the first number (NT) and the (service) second number (NS) are telephone numbers.
- 5 3. A call set-up method according to either of the preceding claims, characterized in that the (telephone) first terminal (T1) is a GPRS mobile telephone terminal.
- 10 4. A call set-up method according to any one of the preceding claims, characterized in that the second terminal (T2) is connected beforehand to the connection server (SMR) using a presence management protocol.
- 15 5. A call set-up method according to claim 4, characterized in that the (called party) second identifier (ID2) is selected on the first terminal (T1), selection of the (called party) second identifier (ID2) on the first terminal (T1) being possible because the presence of the second terminal (T2) has been detected and signaled to the first terminal (T1) by the connection server (SMR).
- 20 6. A call set-up method according to any one of the preceding claims, characterized in that the first number (NT) associated in the correspondence table (TC) with the second identifier (ID2) is the telephone number (N1) of the first terminal (T1) contained in the call request (DA) and the characteristic (CAR) of the incoming call (AE) for indicating a relationship between the first number (NT) and the (service) second number (NS) designates the incoming call (AE(N1→N)) coming from the telephone number (N1) of the first terminal (T1) and going to the (service) second number (NS).
- 30 7. A call set-up method according to any one of claims 1 to 5, characterized in that the first number (NT) associated in the correspondence table (TC) with the

- second identifier (ID2) is the telephone number (N1) of the first terminal (T1) contained in the call request (DA) and the characteristic (CAR) of the incoming call (AE) for indicating a relationship between the first number (NT) and the (service) second number (NS) designates the incoming call (AE(N1→N)) coming from the telephone number (N1) of the first terminal (T1) and going to the (service) second number (NS).
8. A call set-up method according to any one of claims 1 to 5, characterized in that the first number (NT) associated in the correspondence table (TC) with the second identifier (ID2) is the (service) second number (NS) and the characteristic (CAR) of the incoming call (AE) for indicating a relationship between the first number (NT) and the (service) second number (NS) designates the (service) second number (NS).
9. A call set-up method according to claim 8, characterized in that the telephone number (N1) of the first terminal (T1) is contained neither in the call request (DA) nor in the incoming call (AE).
10. A call set-up method according to any one of the preceding claims, characterized in that the connection server (SMR) determines the (service) second number (NS) from a pre-stored list (LNS) of service numbers available for the call request (DA) and is communicated to the first terminal (T1) in an acknowledgement (ACK) sent by the connection server (SMR) after the (called party) second identifier (ID2) is stored in the correspondence table (TC).
11. A call set-up method according to any one of the preceding claims, characterized in that the incoming call (AE) contains other characteristics of the communications channel (CC) to be set up which are also signaled with

the incoming call (AE) to the connection server (SMR) and to the second terminal (T2).

12. A call set-up method according to any one of the preceding claims, characterized in that a first identifier (ID1) of the first terminal (T1) is present in the call request (DA) and is stored by the connection server (SMR) in association with the (called party) second identifier (ID2) and the first number (NT).

13. A call set-up method according to any one of the preceding claims, characterized in that the identifier (ID1, ID2) is different from a telephone number of the corresponding terminal (T1, T2).

14. Apparatus for implementing the method according to any preceding claim for setting up multimedia calls from a (telephone) first terminal (T1) to a second terminal (T2) connected to an IP network, the apparatus being characterized in that it comprises:

- a gateway (PEA) for setting up calls between the first and second terminals (T1, T2);
- a connection server (SMR) including means for receiving a call request (DA) from the first terminal (T1) and means for commanding the first terminal (T1) to send an incoming call (AE) to a particular second number (NS) which is a service number connecting through to the call set-up gateway (PEA), the incoming call (AE) including a call characteristic (CAR) for indicating a relationship between a first number (NT) and the (service) second number (NS);
- a correspondence table (TC) for storing the (called party) second identifier (ID2) for the second terminal (T2) contained in the call request (DA) in association with the first number (NT) determined from the call request (DA);

- first means in the call set-up gateway (PEA) for signaling at least the characteristic (CAR) of the incoming call (AE) to the connection server (SMR);
- means in the connection server (SMR) for  
5 determining the (called party) second identifier (ID2) associated in the correspondence table (TC) with the first number (NT) corresponding to the signaling (SAE) of the characteristic (CAR) of the incoming call (AE) and second means for signaling the incoming call to the  
10 second terminal (T2) corresponding to the (called party) second identifier (ID2) determined in this way;
  - means for instigating the setting up of a multimedia communications channel between the second terminal (T2) and the call set-up gateway (PEA); and
  - 15 · means for connecting the multimedia communications channel to the incoming call via the call set-up gateway (PEA).